

**BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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In the Matter of the Proposed Title V  
Operating Permit Issued to

ConocoPhillips  
to operate a petroleum refinery  
located in Rodeo, California

Facility # A0016

Issued by the Bay Area Air  
Quality Management District

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**PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO THE  
ISSUANCE OF THE PROPOSED TITLE V PERMIT FOR THE  
CONOCOPHILLIPS REFINERY IN RODEO**

INTRODUCTION

Pursuant to Clean Air Act (“CAA” or “Act”) § 505(b)(2) and 40 C.F.R. § 70.8(d), Communities for a Better Environment (“CBE”) hereby petitions the Administrator of the United States Environmental Protection Agency (“US EPA” or “EPA”) to object to issuance of the proposed Title V Operating Permit for the ConocoPhillips Petroleum Refinery in Rodeo, California (“ConocoPhillips Refinery”), Facility #A0016.

The Bay Area Air Quality Management District (“BAAQMD” or “District”) submitted the proposed Title V permit for US EPA’s review on August 25, 2004.<sup>1</sup> US EPA received the proposed Title V permit on August 25, 2004 and its 45-day review period ended on October 8, 2004. This petition is timely filed within 60 days following the conclusion of US EPA’s 45-day review period as required by Clean Air Act § 505(b)(2). Under the CAA, the Administrator must grant or deny this petition within 60 days after it is filed.<sup>2</sup> In compliance with Clean Air Act § 505(b)(2), this petition is based

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<sup>1</sup> See Letter to Deborah Jordan, Director, Air Management Division, US EPA Region 9, from Jack Broadbent, Executive Officer, Air Pollution Control Officer, BAAQMD, August 25, 2004. Available at [http://www.baaqmd.gov/pmt/title\\_v/A0016/A0016\\_2004-08\\_reopen\\_05.pdf](http://www.baaqmd.gov/pmt/title_v/A0016/A0016_2004-08_reopen_05.pdf) (last visited Nov. 11, 2004).

<sup>2</sup> See 42 U.S.C. § 505(b)(2). CBE submitted a petition to EPA that is substantially similar to the current petition in November, 2003. See CBE’s Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the ConocoPhillips Refinery in Rodeo, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003. The November, 2003 petition resulted in the initiation of litigation by CBE and others that was partially resolved in a settlement agreement entered into between the Department of Justice (“DOJ”) and CBE (and others) on Sept 15, 2004. Based on that agreement, EPA must respond to the current petition no later than March 15, 2005. For all references to the November,

on objections to the proposed Title V permit that were raised during the public comment periods.<sup>3</sup> ConocoPhillips submitted its Title V permit application over eight years ago. Over the last two years, CBE has filed three sets of public comments with BAAQMD and two petitions with US EPA regarding ConocoPhillips permit, and the permit is still riddled with inadequacies and non-compliance with the CAA and related rules and regulations. The agency process for issuing oil refinery permits is fundamentally flawed and has been dragged out for far too long. Each day that passes with an inadequate permit, directly impacts the Rodeo community members who live near the refinery. These permitting problems need to be resolved now.

Rodeo is a community that bears a disproportionate share of environmental hazards from the ConocoPhillips Refinery and other industrial activities. The community surrounding the refinery is comprised primarily of low-income people and people of color. For example, the Bayo Vista housing project is home to low-income residents, who are predominantly people of color, female heads of household, and disabled heads of household. Other community facilities within close proximity of the refinery are the Hillcrest Elementary School, the Bayo Vista Headstart Day Care Center, and several homes (including the Bayo Vista Housing Project, a duplex, and a single-family residence). The demographics of schoolchildren at Hillcrest Elementary School and the Bayo Vista Headstart Day Care Center reflect that of the surrounding community.

CBE is a non-profit environmental justice organization committed to the rights of urban low-income communities and communities of color in California who are disproportionately impacted by environmental hazards. CBE has worked in Rodeo for numerous years on environmental justice issues.

EPA “does not have discretion whether to object to draft permits once noncompliance has been demonstrated.”<sup>4</sup> In *New York PIRG*, NY PIRG petitioned EPA to object to three Title V permits issued in the state of New York.<sup>5</sup> The court held that “once NYPIRG demonstrated to the EPA that the draft permits were not in compliance with the CAA, the EPA was required to object to them.”<sup>6</sup>

The Title V comments submitted by CBE to BAAQMD on September 30, 2002, September 22, 2003, and again on April 14, 2004, clearly demonstrate that the permit is not in compliance with the Clean Air Act and related regulations. These examples of non-compliance are further discussed below. Based on this non-compliance, EPA must object to the permit.

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2003 petition, please see Appendix 1. For all references to this settlement agreement, please see Appendix 2.

<sup>3</sup> Comments submitted by CBE dated Sept. 30, 2002, Sept. 22, 2003, and April 14, 2004/April 30, 2004 (with modifications requested by the District) are attached as Appendices 3, 4, and 5, respectively.

<sup>4</sup> *New York PIRG v. Whitman*, 321 F.3d 316, 334 (2<sup>nd</sup> Cir. 2003).

<sup>5</sup> *Id.* at 323.

<sup>6</sup> *Id.* at 334.

This Petition constitutes EPA's fourth opportunity to object to ConocoPhillip's permit based on non-compliance with the Act.<sup>7</sup> In fact, rather than objecting to the permit on all of the non-compliance issues,<sup>8</sup> EPA has submitted several informal letters to BAAQMD requesting revisions to the permit in an informal attempt to bring the permit into compliance.<sup>9</sup> The contents of EPA's letters to BAAQMD, on their own, require EPA to object to the permits because they set out numerous examples of non-compliance. However, these letters do not, on their own, constitute an objection under the Act; therefore, EPA is in violation of a non-discretionary duty of the Act.<sup>10</sup>

EPA's first opportunity to object was during EPA's first 45-day comment period that commenced on August 12, 2003.<sup>11</sup> The District chose to submit the permit for public comments and EPA review concurrently. This submission of the "proposed" permit to EPA on August 5, 2003<sup>12</sup> and a "draft" permit to the public on August 15, 2003 was not in compliance with Clean Air Act § 505(a)(1)(B) and 40 C.F.R. § 70.8(c). The District is required to "provide to the Administrator a copy of each permit proposed to be issued" and the Administrator is required "to object to the issuance of any proposed permit determined by the Administrator not to be in compliance with applicable requirements" of 40 C.F.R. § 70 or the Clean Air Act.<sup>13</sup> A "proposed permit" is "the version of a permit that the permitting authority proposes to issue and forwards to the Administrator for review in compliance with 70.8."<sup>14</sup> In contrast, a "draft permit" is "the version of a permit for which the permitting authority offers public participation."<sup>15</sup> In other words, a draft permit indicates revision, whereas a proposed permit indicates final review.

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<sup>7</sup> At a minimum, EPA should have objected during the following periods: 1) EPA's first 45-day review period that began on August 12, 2003; 2) Within 60 days following CBE's Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the ConocoPhillips Refinery in Rodeo, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003; 3) EPA's second 45-day review period that began on August 25, 2004; 4) CBE's current petition gives EPA until March 15, 2005 to object to the permit.

<sup>8</sup> Most recently, in a letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, US EPA objected only to very particular NSPS and NESHAP inadequate monitoring requirements and permit shield issues. For all references to this letter, please see Appendix 6.

<sup>9</sup> US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003. For all references to this letter, please see Appendix 7.

US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, October 31, 2003. For all references to this letter, please see Appendix 8.

US EPA letter from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, October 8, 2004.

<sup>10</sup> *New York PIRG*, 321 F.3d at 334.

<sup>11</sup> The proposed Title V permits were first issued by the District in June, 2002, and public hearings were held in July, 2002. The District made changes to the draft permit, reissued the draft permit in August, 2003, and held another public comment period at the same time as EPA's first 45-day review period.

<sup>12</sup> See Letter to Jack Broadbent, Director, Air Management Division, US EPA Region 9, from William Norton, Executive Officer, Air Pollution Control, BAAQMD, August 5, 2003. Available at <http://www.baaqmd.gov/pmt/t5/Refinery2003/A0016EPA8-5-03.pdf> (last visited October 31, 2003).

<sup>13</sup> 42 U.S.C § 505(a)(1)(B); 40 C.F.R. § 70.8(c)(1).

<sup>14</sup> 40 C.F.R. § 70.2.

<sup>15</sup> 40 C.F.R. § 70.2.

The District submitted essentially identical draft/proposed permits to US EPA on August 5, 2003 and to the public on August 15, 2003. Although US EPA has indicated that some renderings of concurrent review are valid,<sup>16</sup> these actions by the District were not in compliance with the Clean Air Act or related regulations. The District is required to “submit any information necessary to review adequately the proposed permit.”<sup>17</sup>

Public comments were due on September 22, 2003 and US EPA’s 45-day review period concluded on September 26, 2003 – a disparity of a mere four days. The improper concurrent review period resulted in violations of the Title V public participation requirements. First, the permit submitted to EPA was not a final proposed permit, as it did not contain revisions by BAAQMD based on the submitted public comments. Second, EPA admitted that it did not have adequate time to review all five refinery permits that were submitted at the same time and were hundreds of pages each, nor did it have time to review the comments submitted by the public during its 45-day review period.<sup>18</sup> EPA stated that “EPA has received substantial comments from the public and the refineries earlier this week that we were not able to review in the few days prior to the end of our review period.”<sup>19</sup> EPA also stated that “[w]e were unable to review the proposed Title V permits for Conoco-Phillips Company and Shell Martinez Refinery due to the short review period.”<sup>20</sup> As a result, US EPA submitted a subsequent letter to the District on October 31, 2003, well after the close of the public comment period and the close of EPA’s 45-day review period, offering comments on the Conoco-Phillips and Shell Martinez refineries.<sup>21</sup>

US EPA’s review of a proposed permit is intended to be the final step prior to the issuance of a final permit; either EPA objects or approves the permit. However, it is clear

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<sup>16</sup> During the issuance process, can a permitting authority give notice to EPA, affected States, and the public simultaneously?

Yes, provided EPA has a reasonable opportunity to review any comments received from the public and affected States. The minimum public comment period is 30 days and the EPA review period is 45 days. This would allow EPA 15 days additional review after the public and affected State review, assuming the permitting authority does not provide for a longer public comment period. *Fifteen days may not be sufficient depending on the complexity of the permit.* To provide for a longer EPA period for reviewing the results of public comment, the permitting authority could vary the beginning of EPA’s review resulting in less overlap of the EPA and public comment review where more EPA review after the public comment would likely be needed.

Questions and Answers on the Requirements Of Operating Permits Program Regulations (July 7, 1993) § 7.6 #1 (emphasis added).

<sup>17</sup> 40 C.F.R. § 70.8(c)(3)(ii).

<sup>18</sup> In fact, the District spent 7 years (1996-2003) preparing the first proposed permit and 9 months (October, 2002-July 2003) preparing a combined response to the public comments for all 5 refineries. Just 45 days to review the proposed permits *and* the public comments was inappropriate under Title V.

<sup>19</sup> US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.

<sup>20</sup> *Id.*

<sup>21</sup> US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, October 31, 2003.

that the District and US EPA view this as an “evolving document that will be updated over time” rather than an adequate final permit as required by Title V.<sup>22</sup> US EPA also stated in its September 26, 2003 and October 31, 2003 letters to Steve Hill that “[w]e understand that the District also intends to proposed [sic] additional permit revisions in the near future.”<sup>23</sup> The District’s submission of a draft permit to US EPA and US EPA’s ad hoc attempt to remedy a clearly inadequate permit was not in compliance with the Clean Air Act.<sup>24</sup>

However, rather than objecting to the permits in September, 2003, on its own accord, as it was required to do by the CAA, EPA submitted a letter to the District stating that “[w]e are not objecting to these permits because the District has committed to make a number of specific improvements, and has also committed to following EPA guidelines and regulations to make several applicability determinations once [the District] obtains the necessary information.”<sup>25</sup>

Given EPA’s inappropriate decision not to object to the permit, CBE provided EPA with its second opportunity to object to the permit, by filing its first petition with EPA on November 24, 2003, requesting that EPA object to the permit.<sup>26</sup> However, rather than granting the petition and objecting to the permits, EPA chose a circuitous procedural method that has resulted in a confusing and potentially never ending back and forth between EPA and the District, leaving the public to bear the burden of an inadequate permit.

In a December 12, 2003 letter, EPA informed the District that EPA was reopening the permit based on the above mentioned inappropriate concurrent review that took place in August/September, 2003, rather than objecting based on the substantive comments submitted by CBE and others.<sup>27</sup> This reopening has caused the permit to languish in an administrative quagmire. In the District’s December 31, 2003 letter responding to EPA’s reopening request, the District was loathe to accept EPA’s methodology, claiming that the District was already planning to reopen the permits on its own terms, practically disregarding EPA’s half hearted attempts to remedy the permit problems.<sup>28</sup> This

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<sup>22</sup> BAAQMD Consolidated Responses to Comments on Refinery Title V permits, July 25, 2003, pg. 5 (“Consolidated Responses”). For all references to the Consolidated Responses, please refer to Appendix 9.

<sup>23</sup> US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003. US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, October 31, 2003.

<sup>24</sup> See *New York PIRG*, 321 F.3d at 334.

<sup>25</sup> US EPA letter from Gerardo Rios, Chief Air Permits Office, to Steve Hill, BAAQMD Air Pollution Control Officer, September 26, 2003.

<sup>26</sup> Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the ConocoPhillips Refinery in Richmond, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003.

<sup>27</sup> US EPA letter from Deborah Jordan, Acting Director, Air Division, to Jack Broadbent, Air Pollution Control Officer BAAQMD, December 12, 2003. Attached as Appendix. 10.

<sup>28</sup> BAAQMD letter from Jack Broadbent, APCO, to Deborah Jordan US EPA, December 31, 2003. Attached as Appendix 11. See also letter in response from Deborah Jordan US EPA, to Jack Broadbent, BAAQMD, Feb. 3, 2004, attached as Appendix 12.

ridiculous power struggle between the agencies is simply delaying the issuance of appropriate permits and is in no way helpful to the public, and particularly CBE's members who live near the refinery.

Given EPA's explicit recognition of the noncompliance in the permit,<sup>29</sup> EPA was required to object to the permit. In fact, had EPA objected to the permit during its August/September, 2003 45-day review period or in response to CBE's November, 2003 petition, this power struggle would not be interfering and delaying the process. However, EPA used this reopening as an opportunity to dismiss CBE's November, 2003 petition as unripe causing a third round of public comments, a second 45-day EPA review period, and another significant delay in the issuance of a compliant permit.<sup>30</sup>

This wrangling has delayed the process more than a full year, as this current petition is being filed over a year after CBE's last petition was filed in November, 2003. In addition, the latest correspondence threatens to delay the process even further with no true end in sight. Over four months after the third public comment period concluded on April 14, 2004, the District issued a proposed permit on August 25, 2004 for EPA's second 45-day review period. This 45-day review period constituted EPA's third opportunity to object to the non-compliant permit. Yet EPA again chose to engage in the same agency wrangling that has continued to delay the issuance of an appropriate permit.

On October 8, 2004, at the conclusion of EPA's 45-day review period, rather than objecting to the permits on all of the numerous non-compliance issues, EPA only objected on limited monitoring and permit shield issues.<sup>31</sup> For numerous other non-compliance issues, EPA stated that "the District has agreed to submit applicability determinations to EPA . . . to publish notice to include any necessary revisions to the permits . . . [and] to make certain changes to the permits before issuing them."<sup>32</sup>

The CAA and related regulations do not give EPA the discretion to engage in informal negotiations with the District in an attempt to piece together an adequate Title V permit. This constant back and forth between the agencies has already spanned a few years and is likely to continue ad infinitum, with a never ending process of permit reopenings, wasting the valuable time and resources of commenters such as CBE.<sup>33</sup> This

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<sup>29</sup> See letters to BAAQMD from EPA, *supra* n. 9.

<sup>30</sup> US EPA letter from Deborah Jordan, Acting Director, Air Division, to Holly Gordon and Will Rostov of CBE, December 19, 2003. Attached as Appendix 13.

<sup>31</sup> US EPA letter from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer, October 8, 2004.

<sup>32</sup> *Id.*

<sup>33</sup> The District corresponded with EPA in letters, indicating that the District would be performing yet another reopening that would address some of the issues represented in EPA's October 8, 2004 letter. BAAQMD letters dated October 6 & 8, 2004 from Jack Broadbent, APCO, to Deborah Jordan, Air Division, US EPA. Attached as Appendices 14 and 15. This indication regarding reopening by the District is just another example of why this process has no end in sight. In addition, EPA has assured CBE that EPA will "consider comments filed during any of BAAQMD's previous public comment periods in 2002, 2003, or 2004" during the current petitioning process. EPA letter dated July 6, 2004, from Gerardo Rios, Chief, Permits Office, to Holly Gordon (among others). Attached as Appendix 16. Therefore, regardless

is EPA's fourth opportunity to object. Based on CBE's petitions and EPA's letters to the District, EPA has a laundry list of instances of non-compliance in the permit that requires EPA to object to the permit. CBE's September, 2004 settlement agreement with DOJ (on behalf of EPA) requires that EPA appropriately respond to this petition by March 15, 2005.<sup>34</sup> We implore EPA to finally get it right; avoid lengthy and costly litigation in the 9<sup>th</sup> Circuit, by granting our petition, objecting to the permit, and requiring the District to bring all aspects of the permit into compliance with the CAA and related regulations in a timely manner.

### SUMMARY OF OBJECTIONS

Petitioner requests that the Administrator object to the proposed Title V permit because the permit does not comply with the Clean Air Act and applicable requirements. In particular:

A) The permit is based on an incomplete permit application and an inadequate public process.

B) The permit does not assure compliance with all applicable requirements under the Clean Air Act and related regulations. In particular, the permit does not assure compliance with applicable emissions limitations and with the New Source Review ("NSR") rules; therefore, schedules of compliance must be added to the permit.

C) The District's claim that current monitoring practices are adequate is incorrect and violates the requirements of Title V. The permit must contain adequate monitoring to assure compliance with applicable requirements.

D) The permit does not comply with applicable recordkeeping requirements because the permit does not require submission of the records to the District to ensure access to the records by the public.

E) The treatment of flares is incomplete.

F) Since the refinery emits several hazardous air pollutants, the permit must contain all of the applicable MACT standards.

G) The permit is based on improper procedures as discussed above.

#### A. INCOMPLETE PERMIT APPLICATION AND INADEQUATE PUBLIC PROCESS

The District issued the permit based on an inadequate permit application in violation of 40 C.F.R. § 70.7(a)(1)(i), which states that "[a] permit . . . may be issued

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of BAAQMD's never ending reopening processes, CBE fully expects EPA to consider and address all of the issues raised in the previous three public comment periods.

<sup>34</sup> Settlement Agreement between DOJ and CBE (and others) entered into on Sept. 15, 2004.

only if . . . [t]he permitting authority has received a complete permit application for a permit.” However, despite this clear language, the District does not deny the validity of the permit application inadequacies, but instead claims that “[i]nadequacies in the permit application do not necessarily invalidate the permit. The requirement to submit a complete permit application is an obligation on the facility . . . Whether the facility has met its obligation to submit a complete permit application does not predetermine whether the District can meet its obligation to issue an accurate permit . . . The District could spend a vast amount of time and effort working with the facility to perfect its application, but this would be an exceedingly inefficient allocation of resources, particularly when the legal risk for application incompleteness fall [sic] upon the facility, not the District.”<sup>35</sup>

The District’s legal analysis is simply incorrect. Although the facility *does* have an obligation to submit a complete application, under the Title V implementing regulations, the District may *not* issue a permit that is not supported by a complete application.

The submission of a complete permit application is directly correlated with the public’s ability to participate in the Title V permitting process. However, the District’s procedure regarding public participation in the permitting process was not in compliance with 40 C.F.R. § 70.7(h)(2). The District failed to provide the public with appropriate access to information relevant to the facility in order to meaningfully comment and participate in the Title V permitting process. 40 C.F.R. § 70.7(h)(2) requires the District to post public notice that includes the “name, address, and telephone number of a person from whom interested persons *may obtain* additional information including *all relevant supporting materials . . . , and all other materials available to the permitting authority that are relevant to the permit decision.*”<sup>36</sup> The Title V regulations further support the substantive requirement of notice by stating that “the permitting authority shall provide such notice *and opportunity for participation.*”<sup>37</sup> The District incorrectly suggests that this requirement is solely an obligation to provide public notice information and does not oblige the District to actually *provide* relevant documents or information upon request. The District’s interpretation of this rule strips the notice requirement from the substantive participation requirements.

In violation of the above mentioned regulations, the District and the facility failed to make information required under the Clean Air Act and applicable regulations available to the public. The information the refinery submitted since the original permit application in 1996 has not been made available to the public as an application update.<sup>38</sup> In some cases there are serious gaps between what the refinery applied for and what appears in the permit.

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<sup>35</sup> Consolidated Responses, pg. 9.

<sup>36</sup> 40 C.F.R. § 70.7(h)(2) (emphasis added).

<sup>37</sup> 40 C.F.R. § 70.7(h)(3) (emphasis added).

<sup>38</sup> CBE had to piece together what constituted the pertinent information through a broad public records request.



The difference between the information provided in the permit application and the information in the permit makes it next to impossible for the public to adequately review the permit. The public has little information about changes at the refinery that may have occurred between 1996 and the present that, for example, could affect the permit's applicable requirements. Further, the public has no method of determining whether the permit includes all relevant information because the only reference the public has is an out-of-date and unreliable permit application. Unless the updates to the applications are provided to the public with the permit, or the District thoroughly explains the differences between the original application and the permit in the Statement of Basis, the application and the permit do not meet the minimum requirements of Part 70 and the permit should not be finalized in its current form.

In addition, the permit application is missing several required pieces of information. The permit application fails to list insignificant sources at the refineries. BAAQMD Rule 2-6-405.4 requires every source to be in the permit application even if they are exempt or insignificant. During the rulemaking for BAAQMD's Title V program, the Air Resources Board ("ARB") commented that BAAQMD's rules failed to adequately address insignificant activities.<sup>39</sup> In response to ARB's concern, BAAQMD stated that "[t]he District requires a listing of all sources in the permit application (Section 2-6-405.4) whether significant or insignificant."<sup>40</sup> BAAQMD's failure to require the correct listing of every source is in direct contradiction to its statements to ARB.<sup>41</sup>

In that same response to ARB, the District also stated that "we have expanded the requirement for emission calculations in Section 2-6-405.6 to require calculations of emissions from all sources that have significant emissions, even those that are exempt from District permits or excluded from District regulations." BAAQMD failed to require the facility to submit this information in its permit application. The permit application must be resubmitted with the emission calculations for sources that are exempt from District permits or excluded from District regulations.

The District failed to require the refinery to submit specific information that is crucial for a determination of all applicable requirements and to identify all emission sources. The following information should have been included in the application:

- Comprehensive information on stack discharge points required under 40 C.F.R. §§ 70.5(c)(3)(ii) & (vii). This information should include stack descriptors, stack heights and discharge conditions necessary to conduct air quality modeling to ensure attainment and maintenance of National Ambient Air Quality Standards ("NAAQS") and calculation of Prevention of Significant Deterioration ("PSD") increment consumption.

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<sup>39</sup> Staff Report on Proposed Amendments to BAAQMD Regulation 2, Rule 6, Major Facility Review, April 17, 2001, at p. 12, ARB Comment #7. Attached as Appendix 17.

<sup>40</sup> *Id.*, Response to ARB Comment #7.

<sup>41</sup> Although the Proposed Permit lists exempt sources, given that the permit application did not include a complete list of these sources, it is not clear that the permit section containing exempt sources is complete.

- Detailed information on fuels, fuel use, raw materials, production rates and operating schedules as required by 40 C.F.R. § 70.5(c)(3)(iv).
- Detailed information on air pollution control equipment and compliance monitoring devices as required by 40 C.F.R. § 70.5(c)(3)(v).
- Detailed information on the dates when emission sources and air pollution control equipment were last installed and modified, as required by 40 C.F.R. § 70.5(c)(5). This would enable verification of claims of permit exemption and NSR compliance for modified sources.
- Detailed calculations, input assumptions to the calculations and sufficiently detailed process production rate and throughput capacities which would be required to support other quantitative aspects of its application in violation of 40 C.F.R. § 70.5(c)(3)(viii).

Until all such information is included in the permit application the permit is inadequate and should not be finalized in its current form.

#### B. INADEQUATE SCHEDULES OF COMPLIANCE

The permit is not in compliance with several sections of 40 C.F.R. § 70 regarding the facility's compliance status. 40 C.F.R. § 70.1(b) requires that "[a]ll sources . . . have a permit to operate that assures compliance by the source with all applicable requirements" and 40 C.F.R. § 70.7(a)(1)(iv) states that "a permit . . . may be issued only if . . . the conditions of the permit provide for compliance with all applicable requirements." However, the facility is out of compliance with many of the permit requirements. Therefore, the permit must contain a compliance schedule.<sup>42</sup> In particular, "[s]uch a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements."<sup>43</sup> In addition, the permit must include "[a] schedule for submission of certified progress reports no less frequently than every 6 months for sources required to have a schedule of compliance to remedy a violation."<sup>44</sup>

However, despite these clear requirements, and despite the District's admission that the public "comments described evidence of particular instances of non-compliance,"<sup>45</sup> the permit was issued without a compliance schedule. In fact, the District suggested that issuing the permit without addressing the non-compliance issues was entirely appropriate under Title V. The District responded to the allegations of non-compliance by stating that "there is a balance to be achieved between delaying the permit issuance to address significant compliance issues versus putting those issues aside . . . so

<sup>42</sup> 40 C.F.R. § 70.5(c)(8)(iii)(C).

<sup>43</sup> 40 C.F.R. § 70.5(c)(8)(iii)(C).

<sup>44</sup> 40 C.F.R. § 70.5(c)(8)(iv).

<sup>45</sup> Consolidated Responses, pg. 4.

that the permit can go into effect. In general, the District approaches this balancing exercise with a bias towards issuing the Title V permit while using other enforcement authorities to address the compliance issues . . . If compliance concerns progress to the point where additional Title V permit terms are warranted, those terms can be added later on.”<sup>46</sup> Simply stated, the District does not have the discretion to read compliance requirements out of the statute and Title V requirements.<sup>47</sup>

In particular, the District improperly excludes compliance with NSR rules from the Title V permit. “The District takes the position that the preconstruction review rules themselves are not applicable requirements, for purposes of Title V.”<sup>48</sup> The District also asserts that EPA itself does not view preconstruction permitting rules as applicable requirements. The District’s position is unfounded and incorrect. The District’s SIP, the C.F.R., and EPA rulings and correspondence all unequivocally establish that Title V does require Title V permits to apply preconstruction review rules.

The BAAQMD Rule 2-6-202 describes applicable requirements as:

Air quality requirements with which a facility must comply pursuant to the District’s regulations, codes of California statutory law, and the federal Clean Air Act, including all applicable requirements as defined in 40 C.F.R. 70.2.

NSR is an air quality requirement, codified in the District’s regulation 2-2-101. It applies to all new and modified sources subject to BAAQMD regulation 2-1-301, authority to construct requirements. Since the District regulations require facilities to comply with NSR, these preconstruction review rules must be incorporated in the Title V permit.<sup>49</sup>

EPA’s C.F.R. 70.2 also defines applicable requirements to include preconstruction review requirements. Specifically, applicable requirement means:

(1) Any *standard or other requirement* provided for in the applicable implementation plan approved [SIP] or promulgated by EPA . . . that implements the relevant requirements of the Act, (2) any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking . . . (3) any standard or requirement under section 111 [standards of performance for new and existing stationary sources; and] (4) any standard or other requirement under section 112 [accident prevention for new and existing sources] of the Act.<sup>50</sup>

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<sup>46</sup> Consolidated Responses, pg. 5.

<sup>47</sup> The District is being disingenuous; the District waited 7 years to issue the first proposed permit and now they are claiming that they did not have enough time to address the non-compliance.

<sup>48</sup> Consolidated Responses, pgs. 6-7.

<sup>49</sup> See also 42 U.S.C. § 7503.

<sup>50</sup> 40 C.F.R. § 70.2 (emphasis added).

EPA confirms its position that Title V permits include preconstruction review rules in *In the Matter of Pacific Coast Building Products, Inc., Apex Nevada, EPA* (1999). In *Pacific Coast Building*, the petitioner alleged that the Title V permit under review failed to assure compliance with federal and state preconstruction review programs because, in its opinion, the permit did not apply BACT.<sup>51</sup> Before determining that the permit did apply BACT, EPA articulated that applicable requirements include the requirement to obtain preconstruction permits that comply with Clean Air Act requirements.

[A]ll sources subject to Title V must have a permit to operate that assures compliance by the source with all applicable requirements. Applicable requirements are defined in 40 C.F.R. 70.2 to include . . . Such applicable requirements include the requirement to obtain preconstruction permits that comply with preconstruction review requirements under the Act, EPA regulations, and State Implementation Plans (“SIPs”).<sup>52</sup>

The District’s claim that preconstruction review rules are not applicable requirements for purposes of Title V is clearly erroneous. In fact, the facilities must comply with the preconstruction review rules by formulating appropriate schedules of compliance. The District’s claim that “there is no advantage to holding the Title V permits in abeyance while compliance issues are investigated and resolved”<sup>53</sup> violates federal law. Since the District improperly excluded these requirements from the Title V permit, the permit is not in compliance with appropriate laws and EPA must object.

The ConocoPhillips Refinery is out of compliance with applicable New Source Review rules in the following instances:

#### *Unexplained Increases in Firing Rates*

ConocoPhillips administratively increased the maximum firing rate of several pieces of equipment at the refinery, alleging that firing rates had previously been underreported.<sup>54</sup> The increase in firing rates could be due to debottlenecking. Although these administrative increases may have caused significant emission increases, the District has allowed them to occur without requiring appropriate NSR review under CAA § 111, and related regulations and BAAQMD rule 2-2.

The District explained that it was allowing the administrative increases based on BAAQMD rule 2-1-234.3. However, BAAQMD rule 2-1-234.3 is not applicable to these sources because the rule does not apply to sources, such as these, which have been issued a District authority to construct and are subject to daily or annual emissions limits. In

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<sup>51</sup> See *Pacific Coast*, pg. 6.

<sup>52</sup> *Pacific Coast*, pg. 7.

<sup>53</sup> Consolidated Responses, pg. 6

<sup>54</sup> These comments are based on comments submitted by Adams Broadwell. See Adams Broadwell’s comments: September 30, 2002 regarding the ConocoPhillips refinery, pgs. 40-41, (For all references to this comment letter and relevant exhibits, please see Appendix 18), and September 22, 2003, pg. 15, (For all references to this comment letter and relevant exhibits, please see Appendix 19), for a more detailed discussion of these issues.

addition, this BAAQMD rule does not preempt the requirements of the Clean Air Act. These changes have resulted in modifications to sources requiring NSR because the sources underwent physical or operational changes that caused significant emissions increases.

Since the permit does not contain a schedule of compliance to remedy the deficient NSR, the permit is not in compliance with the Clean Air Act and related regulations and EPA must object to the permit.

### *Throughput Limits*

The permit provisions regarding throughput limits are confusing and potentially contradictory, and therefore it is not clear if the limits are in compliance with applicable New Source Review rules.<sup>55</sup>

The following issues also require schedules of compliance:

### *Unconditional Order of Abatement*

The Statement of Basis explains that the “schedule of compliance for this permit . . . contains the text of an ongoing ‘unconditional order of abatement.’”<sup>56</sup> Despite this order of abatement, the BAAQMD Compliance and Enforcement Division found the Refinery to be in compliance.<sup>57</sup> This is contrary to the experience of the Refinery’s neighbors. The Refinery, in fact, has been out of compliance many times with nuisance odor problems and has had major releases since this unconditional order was issued.<sup>58</sup> The District needs to identify additional requirements for monitoring, limiting, and preventing these problems, and should incorporate these requirements into an appropriate schedule of compliance for the Title V permit.

### *Source Specific Emissions*<sup>59</sup>

Refinery sources S-352 through S-357 consist of 3 turbines and 3 duct burners. The permit imposes several NOx limits for these sources. Among others, it requires all of these sources to meet a NOx limit of 167 tons/yr.<sup>60</sup> The District’s emissions inventory<sup>61</sup> indicates that these six sources emitted 214 tons of NOx in 2001. Thus, the Refinery violated this limit and may still be in violation of this limit.

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<sup>55</sup> Compare Proposed permit submitted to US EPA on August 25, 2004 (“Proposed Permit”), pg. 6, Standard Condition J, with pg. 316.

<sup>56</sup> BAAQMD, Nov. 2003, Statement of Basis, pg. 12. For all references to this document (pgs. 1-31 only), please see Appendix 20.

<sup>57</sup> *Id.*

<sup>58</sup> See e.g. BAAQMD Incident Report, October 31, 2004. Attached as Appendix 21.

<sup>59</sup> These comments were taken from Adams Broadwell’s comments submitted to BAAQMD on September 30, 2002, pg. 59.

<sup>60</sup> Proposed Permit, pg. 289.

<sup>61</sup> See emissions inventory discussion below.

Refinery sources S-400 is a wastewater sump, S-324 is an oil/wastewater separator, and S-1007 is a dissolved air flotation unit. The permit imposes a condition requiring “no detectable VOC emissions” from these sources.<sup>62</sup> However, for 2001, the District’s emissions inventory shows 15,750 lbs of VOC emissions from S-400, 57,960 lbs of VOC emissions from S-324, and 6.624 lbs of VOC emissions from S-1007. Clearly these sources are emitting VOCs at detectable levels.

The permit prohibits emissions from the Unicracking Unit (S-307) as follows: VOC “emissions streams with 15lb/day and 300 ppm total carbon on a dry basis prohibited.”<sup>63</sup> In 2001, the District’s emissions inventory indicates that S-307 had average daily VOC emissions of 468 lbs. Neither the permit, Statement of Basis, nor the emissions inventory identify total carbon emissions from this unit.

The refinery is not in compliance with all applicable emission limits; schedules of compliance must be added to the permit where necessary.

### *Emissions Inventory*

In response to comments that find non-compliance history based on exceedances of the refinery’s reported emissions inventories, the District claims that “[b]ecause the emissions inventory functions as a macro tool the District does not subject emissions inventory figures to analysis sufficiently rigorous to ensure credibility relative to compliance with applicable requirements.”<sup>64</sup> Yet, the District uses emissions inventory estimates for purposes of establishing exemptions from emissions limits. The District must take a consistent position. If emissions inventory data is not sufficiently accurate for purposes of Title V permitting, then it cannot be included in the refinery’s permit application and may not be used for establishing any permit conditions, including exemptions.

The District’s response to comments is inconsistent with its own guidelines. The District’s Manual of Procedures does allow the use of emissions inventory for establishing the emission limits of a Title V permit.

The requirement to include emission calculations for a source may be satisfied by the submission of emission inventory calculations provided by the District, based on throughput data from the most recent annual renewal and calculated using APCO approved emission factors. If accurate emission inventory calculations for a source are not available from the District, the facility must provide the calculations and explain any assumptions regarding emission factors and abatement factors. . . . The emission calculations included in the permit application (whether those supplied by the District or calculated

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<sup>62</sup> Proposed Permit, pgs. 388-90.

<sup>63</sup> Proposed Permit, pg. 397-98.

<sup>64</sup> Consolidated Responses, pg. 16.

independently by the facility) must be certified by the responsible official as complete, accurate, and true.<sup>65</sup>

In addition, the Clean Air Act requires that the submission of nonattainment plans include “a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants.”<sup>66</sup> The Bay Area is in nonattainment for ozone; therefore, accurate emissions inventories are required.

### *Flaring*<sup>67</sup>

The refinery experienced a flaring incident on July 10, 2002, during which the District estimates that 480 to 720 tons of hydrocarbons and 20-28 tons of sulfur dioxide were emitted to the atmosphere.<sup>68</sup> The District issued NOV's for this incident. It is not clear whether the District has resolved these and all other outstanding NOV's with the Refinery, which, at a minimum, it must do before the Refinery can be considered “in compliance.” Further, the District must identify the root cause of this and other compliance problems at the refinery and impose a schedule of compliance that requires the refinery to implement the process or operational changes necessary to avoid such incidents in the future.

## C. INADEQUATE MONITORING

Title V of the Clean Air Act and related regulations requires “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit” and that “[a]ll permits shall contain . . . compliance certification, testing, monitoring, reporting and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit.”<sup>69</sup> Despite these requirements, the District erroneously concluded that including monitoring in a Title V permit is discretionary based on a balancing test of their own making, rather than a clear requirement.

The District stated in the Statement of Basis that “although Title V calls for a re-examination of all monitoring, there is a presumption that these factors [used by the District to determine whether monitoring is necessary] have been appropriately balanced and incorporated in the District’s prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, *no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation.* Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or

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<sup>65</sup> BAAQMD Manual of Procedures, Volume II, Part 3, p.3-7, 3-8 (May 2, 2001).

<sup>66</sup> 42 U.S.C. § 7502.

<sup>67</sup> These comments were taken from Adams Broadwell’s comments submitted to BAAQMD on September 30, 2002, pg. 59.

<sup>68</sup> BAAQMD, Incident Report, Plant A0016, updated 7/18/02. Attached as Appendix 22.

<sup>69</sup> 42 U.S.C. §504(c); 40 C.F.R. § 70.6(a)(3)(i)(B); 70.6(c)(1).

frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate.”<sup>70</sup>

The District’s determination that, in some cases, requiring additional monitoring is inappropriate where there is no monitoring, directly contradicts the mandate of Title V of the Act. “If an applicable State emission standard contains no monitoring requirement to ensure compliance, EPA’s regulation requires the State permitting agency to impose on the stationary source some sort of ‘periodic monitoring’ as a condition in the permit or specify a reasonable frequency for any data collection mandate already specified in the applicable requirement.”<sup>71</sup> By its own admission, the District has failed to place monitoring requirements on sources where historically there has been no monitoring.

In addition, the District created and relies upon its own presumption that existing monitoring is adequate. According to the District, “a presumption of adequacy for existing monitoring is appropriate because the District has traditionally applied the same factors to assessing monitoring that are called for by Title V.”<sup>72</sup> The District claims it reviewed all monitoring in the permits for sufficiency and determined that, with very few exceptions, the monitoring is sufficient.<sup>73</sup> However, neither Title V nor its implementing regulations authorize such a presumption. To the contrary, Title V specifically authorizes and requires the imposition of new monitoring requirements on a facility to assure compliance with permit conditions and other applicable requirements.

#### *Emission Limitations*

For all of the following pollutants/sources of pollutants, the permit cites no or inadequate monitoring requirements:

A large number of refinery sources, including boilers,<sup>74</sup> furnaces,<sup>75</sup> heaters,<sup>76</sup> combustion turbines and duct burners,<sup>77</sup> and sulfur plants,<sup>78</sup> have federally enforceable limits for opacity and/or filterable particulate (“FP”) pursuant to BAAQMD regulations 6-301 and 6-310, respectively.

Gasoline dispensing facilities have federally enforceable limits for VOCs pursuant to BAAQMD regulations 8-7.<sup>79</sup>

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<sup>70</sup> BAAQMD, November, 2003, Statement of Basis, pgs. 16 (emphasis added).

<sup>71</sup> *Appalachian Power Co. v. Environmental Protection Agency*, 208 F.3d 1015, 1019 (D.C. Cir. 2000).

<sup>72</sup> Consolidated Responses, pg. 17.

<sup>73</sup> *See id.*

<sup>74</sup> Proposed Permit, pgs. 333, 335.

<sup>75</sup> Proposed Permit, pgs. 379, 381, 384.

<sup>76</sup> Proposed Permit, pgs. 324, 326, 328, 329-31, 337-340, 342, 344, 345-46, 348-50, 352, 354-58, 360-61, 363-64, 366, 369, 374, 377, 386.

<sup>77</sup> Proposed Permit, pg. 402, 405.

<sup>78</sup> Proposed permit, pg. 409.

<sup>79</sup> Proposed Permit pg. 393-94.



Since the permit does not contain adequate monitoring requirements to assure compliance with the applicable required limits, EPA must object to the permit.

### *Storage Tanks*

Storage tanks have federally enforceable limits for VOCs pursuant to BAAQMD regulations 8-5. Therefore monitoring requirements are necessary to assure compliance with these limits. However, the use of “look up” tables and sample analysis as the required type of monitoring is inappropriate – in fact these methods are not actually monitoring. For this rule, the District improperly proposes to use emission factors as a substitute for monitoring.<sup>80</sup>

#### D. INADEQUATE SUBMISSION OF REPORTING REQUIREMENTS

The reporting requirements in the permit are not in compliance with 40 C.F.R. 70.6(a)(3)(iii)(A), which states that “[w]ith respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following . . . [the] *[s]ubmittal* of reports of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports.”<sup>81</sup>

In many places in the permit, BAAQMD requires the refinery to maintain logs at the facility for five years, but BAAQMD fails to require reporting of the data collected in these logs every six months, as required by Title V.<sup>82</sup> BAAQMD consistently states that these logs “shall be kept on site and made available to District staff upon request.”<sup>83</sup> By itself, this is improper. BAAQMD needs to include the semi-annual reporting requirement in each place in the permit where BAAQMD requires the facility to make the log “available to District staff upon request.”

BAAQMD’s failure to include semi-annual reporting requirements appears to be an improper policy adopted in the permit: the permit consistently requires the refinery to maintain records at the facility, but does not require those records to be regularly submitted to BAAQMD. This defeats the purpose of Title V. Title V was created to allow the public the ability to see if a facility was in compliance with its permit conditions. If all the records are maintained at the facility, the public has no access to them through the Public Records Act. Without access to the compliance information, the public remains in the dark despite adoption of the permit.

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<sup>80</sup> See Proposed permit, pgs. 422, 424, 427, 430, 433, 435, 436, 438, 441, 443, 445, 447, 449, 451, 454, 458, 460.

<sup>81</sup> Emphasis added.

<sup>82</sup> See ConocoPhillips Proposed Permit Condition 383, Title V Permit, p. 278; Condition 12121, Title V Permit at 288; Condition 12122, Title V Permit at 290; Condition 12124, Title V Permit at 290; Condition 12125, Title V Permit at 291; Condition 12127, Title V Permit at 291; Condition 12129, Title V Permit at 292; Condition 12133, Title V Permit at 293; Condition 16677, Title V Permit at 294; Condition 18251, Title V Permit at 295; Condition 19476, Title V Permit at 302; (This is not an exhaustive list)

<sup>83</sup> *Id.*

General permit condition F in the permit fails to compensate for this problem; it states: “Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting.” Even though this condition requires semi-annual reporting, the lack of specific directive with each record keeping requirement in the permit creates an ambiguity that could result in the facility arguing that very few items must be reported to the District and the withholding of important information that must be publicly available under Title V. The District must change this condition F to add the following italicized language: “Reports of all required monitoring *and reports of data from all logs maintained at the facility* must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting.” Since the permit is out of compliance with applicable Title V regulations, EPA must object.

#### E. FLARES

ConocoPhillips’ Title V permit fails to include key federal and state applicability provisions and the monitoring necessary to comply with federal rules related to flares. Namely, the permit fails to include NSPS Subpart J and A requirements. The permit also fails to include federally enforceable BAAQMD rule 8-2 and proper monitoring. Additionally, EPA violated Title V when it failed to object to this permit after acknowledging that the permit omitted federally enforceable requirements.

#### *The Title V Permit Fails to Include Federally Enforceable Flare Provisions*

ConocoPhillips operates two flares at its San Francisco refinery in Rodeo: S-296 and S-398. The permit illegally exempts S-296 from NSPS Subparts J and A.<sup>84</sup> NSPS Subpart A and Subpart J should apply to both flares. Moreover, the Permit illegally exempts flare S-398 from 40 C.F.R. § 60.104, in Subpart J.

While somewhat vague, the Statement of Basis has exempted S-296 from NSPS Subpart J because the flare was constructed prior to 1973.<sup>85</sup> However, NSPS applies to sources that have been constructed *or modified* after 1973.<sup>86</sup> The conclusion that ConocoPhillips has not modified S-296 is unsupported. First, there is evidence that the flare has been modified; second, the Statement of Basis construes modifications too narrowly; and third, the Statement of Basis fails to include information that would reveal whether or not modifications had occurred.

First, in an email between ConocoPhillips engineer, Valerie Uyuda, and BAAQMD engineer, Julian Elliot, ConocoPhillips acknowledged that it had replaced the burner tip to S-296<sup>87</sup>, a change that the District accepts as constituting a flare

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<sup>84</sup> See Proposed Permit pg. 86.

<sup>85</sup> BAAQMD Statement of Basis, July 2004, pg. 8. For all references to this SOB (excluding appendices D&F), please see Appendix 23.

<sup>86</sup> See 40 C.F.R. § 60.100(b).

<sup>87</sup> Email from Valerie Uyeda, ConocoPhillips Environmental Department, to Julian Elliot, BAAQMD Engineer, Re: Flare Flowrates for S-296, January 23, 2004. Attached as Appendix 24.

modification.<sup>88</sup> Hence, based on the District's own reasoning, this flare is subject to NSPS requirements.

Secondly, even if ConocoPhillips had not admitted to having made this modification, modifications still may have occurred. The Statement of Basis construes "modification" too narrowly. Based on the federal regulation, a modification is:

any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.<sup>89</sup>

A change to a source to which the flare is attached, such as an increased throughput, would physically modify the flare and potentially increase the amount of hydrocarbons or any of a host of other air pollutants emitted to the atmosphere. But according to the District, a modification occurs only when the flare burner tip is replaced.<sup>90</sup> The District's interpretation of "modification" is impermissibly narrow. It is generally accepted that a flare consists of more than just a burner tip.

The typical flare system consists of (1) a gas collection header and piping for collecting gases from processing units, (2) a knockout drum (disentrainment drum) to remove and store condensables and entrained liquids, (3) a proprietary seal, water seal, or purge gas supply to prevent flash-back, (4) a single- or multiple-burner unit and a flare stack, (5) gas pilots and an ignitor to ignite the mixture of waste gas and air, and, if required, (6) a provision for external momentum force (steam injection or forced air) for smokeless flaring.<sup>91</sup>

In designing a flare, important considerations include, among others, reliable burning, hydraulics, liquid removal, air infiltration, and flame radiation.<sup>92</sup> All of these considerations translate into parts that must be included in a flare, such as burner pilots, pilot ignitors, pilot monitors, flame stabilizers, relief valves, knock out drums, and liquid seal.<sup>93</sup> The District's position is untenable and the Statement of Basis fails to contemplate other flare modifications that trigger NSPS.

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<sup>88</sup> BAAQMD Statement of Basis, July 2004, (Appendix C) pg. 31.

<sup>89</sup> 40 C.F.R. § 60.2.

<sup>90</sup> BAAQMD Statement of Basis, July 2004, (Appendix C) pg. 31.

<sup>91</sup> Environmental Protection Agency, *AP 42 Emissions Factors*, Chapter 13.5.1., Industrial Flares. Attached as Appendix 25.

<sup>92</sup> *Flare System Design – What is Important?* John Zink Company, 1998. Attached as Appendix 26.

<sup>93</sup> *Id.* at 4-8.

Additionally, the Permit fails to comply with 40 C.F.R. § 270.42(a)(b) by failing to include a condition in the Title V permit requiring ConocoPhillips to notify the District when it replaces flares tips and/or when the refinery makes any other flare modification.<sup>94</sup>

The Permit also exempts flare S-398 from applicable requirement, 40 C.F.R. § 60.104<sup>95</sup> based on the assumption that “some of the facilities have identified NSPS flares that are not designed to burn anything other than ... gases that result from emergency breakdowns.”<sup>96</sup> The Statement of Basis describes this and other situations in which section 60.104 might not apply. However, the Statement of Basis does not describe why S-398 is exempt from the fuel gas limit. Accordingly, NSPS Subpart J should apply to these flares, including 40 C.F.R. § 60.104, or provide the basis for the exemption.

*CONOCOPhillips’ FLARES ARE SUBJECT TO NSPS SUBPART A*

The Permit illegally exempts S-296 from NSPS Subpart A requirements. Since Subpart J applies, the Subpart A requirements are also applicable and must be included in the permit.<sup>97</sup>

*CONOCOPhillips’ FLARES ARE SUBJECT TO THE MISCELLANEOUS OPERATIONS RULE*

The Permit fails to include federally enforceable BAAQMD Regulation 8-2. That section prohibits the discharge into the atmosphere from any miscellaneous operation an emission containing more than 15 lbs per day and a concentration of more than 300 ppm total carbon on a dry basis.<sup>98</sup> A miscellaneous operation is one that is not limited by another rule in regulation 8 or 10.<sup>99</sup> Since flares are not covered by another rule<sup>100</sup>, they are subject to the miscellaneous operations rule. An exception to this rule is met if the flaring results from combustion efficiency of 90% or greater.<sup>101</sup> Without measuring combustion efficiency, the Permit exempts the flares from this federally enforceable provision on the basis that flares are exempt from this regulation during any flaring event where conditions ensure proper operation.<sup>102</sup> EPA must object to the permit on this basis because (1) the permit conditions do not come close to ensuring that ConocoPhillips meets the exemption requirement, (2) only flaring events, not flares should be exempt from the rule.

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<sup>94</sup> ConocoPhillips must notify the District if it is going to make a modification to the flare, which, according to the District, includes changing the flare burner tip. See 40 C.F.R. 270.42(a)(b).

<sup>95</sup> Proposed Permit, pg. 134.

<sup>96</sup> BAAQMD July, 2004 Statement of Basis, pg. 31.

<sup>97</sup> See, Letter dated October 8, 2004 from Deborah Jordan, Director, Air Division, to Jack Broadbent, BAAQMD Air Pollution Control Officer Attachment 3, page 2. “Subpart A is an applicable requirement for all flares meeting the applicability criteria of 40 CFR 100(a) and (b), including flares that are exempt from the H2S limit pursuant to 60.104(a)(1).”

<sup>98</sup> BAAQMD Regulation 8-2-301.

<sup>99</sup> BAAQMD Regulation 8-2-201, 8-2-301.

<sup>100</sup> See CBE’s Petition Requesting that the Administrator Object to the Issuance of the Proposed Title V Permits for the ConocoPhillips Refinery in Rodeo, submitted by Holly Gordon and William Rostov, CBE, November 24, 2003, pgs. 18-19.

<sup>101</sup> BAAQMD Regulation 8-1-110.3

<sup>102</sup> BAAQMD Statement of Basis, July 2004, pg. 30.

According to the Statement of Basis, the flaring event is exempt if (1) the flare is properly designed – which all are assumed to be – (2) the flare is operated within its design capacity, (3) the BTU content of gases flared exceed 300 Bth/scf, and (4) a flame is present.<sup>103</sup> But numerous studies have established that there are other factors that lower combustion efficiency, including wind speed, low load, steam quenching, gas heat content, and low exit velocity. These factors can decrease efficiency to as low as 50%.<sup>104</sup> Moreover, even if there is a flame, if that flame splits or there is smoking, flare efficiency is not high. The Permit condition does not take this into account.

The Alberta study shows that wind can affect flares.<sup>105</sup> CBE modeled wind turbulence (gust) data from the Chevron MET station and determined that wind can affect flare combustion efficiency at Chevron and at other Bay Area refineries. CBE has concluded that wind speeds rise to such a level that flare combustion can be affected 20% of the time. This assumes seven meters per second or greater winds. Based on visible flare instability, flare separation, fluctuations in fuel, and the range of gas composition, combustion efficiencies are lower.

Another study<sup>106</sup> concluded that low flows/loads to flares contribute to combustion inefficiencies at oil refinery flares. Specifically, the Swedish study found that while flare efficiency at higher loads was 98%, low load flaring resulted in a 50-90% flare efficiency.<sup>107</sup>

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<sup>103</sup> BAAQMD Statement of Basis, July 2004, pg. 30.

<sup>104</sup> See *CBE flare report*, pg. 33, 2004 (attached as Appendix 27); see also *Comments on Regulation 12, Miscellaneous Standards of Performance Rule 11, Flare Monitoring at Petroleum Refineries, Draft*, (April 7, 2003), Prepared by J. Phyllis Fox, Ph.D., P.E., DEE, Consulting Engineer, Berkeley, CA, April 16, 2003) (attached as Appendix 28). “The literature cited by the District indicates that flare efficiency ranges from 62% to over 98%. Only one of the studies reviewed by the District, Boden et al. (1996), supports a flaring efficiency of 98% or greater. This study only measured C<sub>1</sub> thru C<sub>6</sub> alkanes in the flared gases, ignoring soot, CO, non-alkanes, and higher molecular weight alkanes, which are products of incomplete combustion. Thus, this study underestimated flaring efficiency by an indeterminate amount.

The other flare efficiency studies that the District reviewed report flaring efficiencies much less than 98% under some conditions. One recent study of Alberta oil field flares reported the average combustion efficiency for two flares (39 ft. high, 8 in. dia; 49 ft. high, 3 in. dia.) was below 70%. Another study reported efficiencies of 62% (high flow rates) to 71% (low flow rates, controlled by knockout drum) when flare gases containing no H<sub>2</sub>S and 82% to 84% when flaring sour, 23 wt% H<sub>2</sub>S gases. Similarly, the efficiency of oil field flares in Nigeria ranged from 80% to over 98%. The Alberta studies suggested that entrainment of air into the region of combusting gases restricted flame sizes to less than optimum values. The resulting flames are too small to dissipate sufficient heat to result in high combustion efficiencies. This conclusion is consistent with wind tunnel experiments, which showed that a low exit velocity makes flames susceptible to wind effects and reduces flare efficiency. These studies were analyzed to develop a model that predicts flare efficiency as a function of wind speed, stack exit velocity, flame temperature, stoichiometric mixing ratios, and other parameters.” (Citations omitted)

<sup>105</sup> The Alberta Study was presented in 1999 in Calgary. The paper is entitled, Efficiency Measurements of Flares in a Cross Flow, by M.R. Johnson, O. Zastavnuik, D.J. Wilson and L.W. Kostiuik.

<sup>106</sup> “Measurements of VOCs at Refineries Using the Solar Occultation Flux Technique,” by Karin Fransson and Johan Mellquist (2002).

<sup>107</sup> *Id.*

Steam quenching can also affect combustion efficiency. Steam assist generally improves mixing of fuel with air for better combustion, but an EPA study from 1983 on flare efficiency found that at lower flows and high amounts of steam (>7lbs steam/lb of waste gas), the combustion efficiency dropped, down to 70%.<sup>108</sup> According to Karen Olson, an engineer at the Texas Natural Resources Conservation Commission (TNRCC) (project lead in the Texas state study on flare efficiency), “this data indicates that too much steam is partially quenching the flame at low flows, and no one requires the control of steam.”<sup>109</sup>

Gas heat content can affect combustion efficiency. When a flare mix contains a large quantity of nitrogen, BTU content can be reduced to such a degree that combustion efficiency is significantly affected.

Low exit velocity is also a cause of lower combustion efficiency. TNRCC recently developed a vent gas control rule. That rule “requires that emissions be calculated ‘assuming a 98% destruction efficiency when the flare is in compliance with heating value and exit velocity requirements of 40 CFR 60.18, a destruction efficiency of 93% shall be assumed to calculate HRVOC mass emission rates.’”<sup>110</sup> The 93% destruction efficiency is based on the median destruction efficiency “from selected flare tests conducted during EPA flare studies in the 1980s.”<sup>111</sup> This implies that the CE is sometimes in the 88% range when heating value and exit velocity requirements are not met. Wind tunnel experiments also reveal that a low exit velocity makes flames susceptible to wind effects and reduces flare efficiency.<sup>112</sup>

The Statement of Basis did not consider any of these issues in determining that the proposed condition gives a reasonable assurance that the 90% combustion efficiency requirement is met. While combustion efficiency testing is expensive, this does not justify assuming that flares meet the exception to 8-2-301.

EPA has also agreed that the exception to the miscellaneous operations rule has not been demonstrated.<sup>113</sup> The District included condition 18255 to demonstrate that fuel efficiency would exceed 90%.<sup>114</sup> But EPA noted that while the BAAQMD regulation 8-2 is federally enforceable, the monitoring in the condition used to ensure compliance is not federally enforceable.<sup>115</sup> Therefore, the monitoring must be made federally enforceable. Furthermore, the District has not demonstrated that the flares are correctly designed by conducting design review, which the District admits is necessary to ensure compliance

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<sup>108</sup> McDaniel, Engineering Sciences Incorporated, EPA-600/2-83-052, July 1983.

<sup>109</sup> Telephone conversation between Julia May and Karen Olson, May 17, 2004.

<sup>110</sup> TCAA §115.725(d)(6).

<sup>111</sup> See excerpt from *Comments on Regulation 12, Miscellaneous Standards of Performance Rule 11, Flare Monitoring at Petroleum Refineries, Draft, (April 7, 2003)*, Prepared by J. Phyllis Fox, Ph.D., P.E., DEE, Consulting Engineer, Berkeley, CA, April 16, 2003).

<sup>112</sup> M.R. Johnson, O. Zastavniuk, D.J. Wilson, and L.W. Kostiuk, Efficiency Measurements of Flares in a Cross Wind, Presented at Combustion Canada, Calgary, Alberta, May 26-28, 1999.

<sup>113</sup> Letter from Gerardo Rios, U.S. E.P.A. Region IX, pg. 1, August 2, 2004.

<sup>114</sup> Proposed Permit, pg. 134.

<sup>115</sup> *Id.*

with the rule.<sup>116</sup> Instead, the District relies on the fact that “‘OSHA requires that flare system design basis and testing information be kept at the facilities and that flares be operated consistent with the design basis.’”<sup>117</sup>

Even if the permit conditions did ensure high combustion efficiency, the Permit still must list regulation 8-2 as an applicable requirement, and the refinery must demonstrate that the exception applied during each event. The Statement of Basis itself acknowledges that these conditions will not always be met:

The District ... anticipates that the safe operation of the flare will cause the flare to exceed its capacity, with a possible reduction in destruction efficiency. This will result in a violation, but the event will be handled safely.<sup>118</sup>

The exemption is met for each event in which combustion efficiency exceeds 90%; the exception does not apply to flares as a blanket rule. (Hence the rule applies to *operations* that exceed this rate, not *sources*.) Therefore, the miscellaneous operations rule is an applicable rule and should have been included in ConocoPhillips’ Title V permit.<sup>119</sup>

***EPA Failed to Object to the Permit Even After Determining That Certain Applicability Determinations Were Not Made***

EPA acknowledged in its October 8, 2004 permit review that the ConocoPhillips Statement of Basis failed to make a determination on the applicability of 40 C.F.R. Part 63, Subpart CC. Therefore, based on CAA section 505(b)(1) and 40 C.F.R. 70.8(c), EPA violated the Clean Air Act by not objecting to this omission because EPA is required to object to permits that do not comply with the Title V program.<sup>120</sup>

***The Permit Creates Improper Flare Emissions Limits***

The permit improperly creates a flare emissions “limit” through Condition 18255 ostensibly to demonstrate compliance with the exception to BAAQMD regulation 8-2-301. In fact, the Permit creates a limit that is no limit at all, allowing ConocoPhillips to flare at an unacceptable rate.

The owner/operator shall not flare more than 1.69 E 6 pounds per hour of vent gas (total) as defined in Regulation 12-11-210 at flares S-296 and S-398. [Regulation 8-1-110.3; 2-1-403]<sup>121</sup>

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<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> BAAQMD Statement of Basis, July 2004, pg. 30.

<sup>119</sup> The Statement of Basis also states that emissions due to flaring from sources subject to a regulation are not subject to 8-2. *See* BAAQMD Statement of Basis, July 2004, pg. 29. But only flares emit gases due to flaring – only flares flare. And since flares are sources (and have source numbers) and are not subject to any other regulation, this statement is irrelevant.

<sup>120</sup> *See* 42 U.S.C. § 505(b)(2); *see also* *New York PIRG*, 321 F.3d at 334.

<sup>121</sup> Proposed Permit, pg. 295.

In light of the total Bay Area inventory for VOCs, these numbers are extremely high. They also conflict with, and do not assure compliance with the Miscellaneous Operations rule's 15 lb/day limit, which the District should enforce for these sources.<sup>122</sup> The Title V permit cannot be used to create new limits.

*Flare Monitoring Language Added to the ConocoPhillips Permit Is Inconsistent With the New Flare Monitoring Regulation*

New monitoring requirements were added to the proposed ConocoPhillips permit, incorporating some of BAAQMD flare monitoring regulation 12-11 into the Title V permit. However, rather than using the actual regulation language, the Permit incorporates new language that re-defines the monitoring requirements inconsistently with the regulation. For example, the Title V permit states:

For the purposes of these conditions, a flaring event is defined as a flow rate of vent gas flared in any consecutive 15 minutes period that continuously exceeds 330 standard cubic feet per minute (scfm). If during a flaring event, the vent gas flow rate drops below 330 scfm and then increases above 330 scfm within 30 minutes, that shall still be considered a single flaring event, rather than two separate events.<sup>123</sup>

This language is not contained in the District's flare monitoring regulation 12-11. There is similar language in the flare monitoring regulation that defines the methods and requirements for *monitoring* a flaring event when gases flared exceed 330 standard cubic feet per minute for consecutive 15 minutes periods. However, the rule does not *define* a flaring event as only those meeting these criteria. Stating that a flaring event is defined in this restrictive way defines away real flaring events less than 330 scfm for consecutive 15 minutes periods. For example, if ConocoPhillips flared at 329 scfm all day long, this would add up to 473,760 scf per day, a substantial amount of flaring. But according to ConocoPhillips' permit, this flaring would not constitute flaring at all. Unfortunately this could be construed by ConocoPhillips to mean that they do not have to record such flaring, monitor them in other ways, or report them. This language should be removed, and the actual language of the regulation should be used.<sup>124</sup>

The Permit also includes language suggesting that once video monitoring occurs, no further monitoring is necessary and that they included the totality of visual monitoring:

4. "The owner/operator shall use the following procedure for the initial inspection and each 30-minute inspection of a flaring event.
  - a. If the owner/operator can determine that there are no visible emissions using video monitoring, then no further monitoring is necessary for that particular inspection.<sup>125</sup>

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<sup>122</sup> See BAAQMD Regulation 2-1-403. "[T]he APCO may impose any permit condition that he deems reasonably necessary to insure compliance with federal or California law or District regulations."

<sup>123</sup> Proposed Permit, pgs. 295-296.

<sup>124</sup> See BAAQMD Regulation 12-11.

<sup>125</sup> Proposed Permit, pg. 296.



Many other monitoring provisions are still required after video monitoring. Moreover, the District regulation video monitoring requirements were not meant to exempt ConocoPhillips from any further visual inspection of flares, but were meant to add to them. It is still necessary for ConocoPhillips to identify, for example, any smoking of flares over three minutes, regardless of whether a video monitoring inspection has previously been done.

The District has listed this regulation as non-federally enforceable,<sup>126</sup> even though EPA has expressed the opinion that it should be federally enforceable – so that it can be used to demonstrate compliance with other rules.<sup>127</sup> Regardless of whether BAAQMD regulation 12-11 is federally enforceable, if the Title V permit includes non-enforceable requirements, it must do so properly. The permit must reflect actual applicable requirements including flare monitoring requirements. The permit must reflect actual applicable requirements including flare monitoring requirements including flare monitoring requirements.

#### F. APPLICABLE MACT STANDARDS

The refineries are “major sources” of Hazardous Air Pollutants (HAPs) because they emit or have the potential to emit 10 tons per year or more of any single HAP or 25 tons per year or more of any combination of HAPs.<sup>128</sup> Therefore they are required to comply with Clean Air Act section 112 National Emission Standards for HAPs (NESHAPS) reflected in the application of Maximum Achievable Control Technology (MACT). Several MACT requirements that apply to the refinery have not been included in the permit and therefore the permit is out of compliance with section 112 of the Clean Air Act and related regulations.<sup>129</sup>

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<sup>126</sup> Proposed Permit, pg. 133.

<sup>127</sup> See eg., Letter from Gerardo Rios, U.S. E.P.A. Region IX, to Steve Hill, BAAQMD, pg. 1, August 2, 2004. Attached as Appendix 29.

<sup>128</sup> 42 U.S.C. § 112(a)(1).

<sup>129</sup> See comments submitted by Adams Broadwell regarding the ConocoPhillips refinery, September 30, 2002, pgs. 41-51.

## CONCLUSION

In sum, the permit is drastically out of compliance with the Clean Air Act and applicable regulations. Therefore, EPA has no choice but to object to the permit.

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Respectfully Submitted,

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Holly Gordon  
William Rostov  
Attorneys for:  
Communities for a Better Environment  
1611 Telegraph Ave., Suite 450  
Oakland, California 94612  
(510)302-0430